

APPENDIX A: REPLACEMENT PARAGRAPHS MARKED AS AMENDED.

(i) Replaced paragraph beginning at the bottom of page ²⁹~~26~~ and extending through the top of page ³⁰~~27~~, which begins "The nucleotide and protein, polypeptide and peptide sequences for various genes have been previously disclosed...."

--The nucleotide and protein, polypeptide and peptide sequences for various genes have been previously disclosed. In certain embodiments, the template or primer sequence may be obtained from a public source, such as, for example, a computerized database known to those of ordinary skill in the art. One such database is the National Center for Biotechnology Information's Genbank and GenPept databases (~~http://www.ncbi.nlm.nih.gov/~~). The coding regions for these known genes may be amplified and/or expressed using the techniques disclosed herein or by any technique that would be known to those of ordinary skill in the art. In certain embodiments, the primer may be a degenerate primer designed based on a peptide sequence, as would be known to one of ordinary skill in the art. --

(ii) Replaced second paragraph of page 56, which begins "Host cells may be derived from prokaryotes or eukaryotes...."

-- Host cells may be derived from prokaryotes or eukaryotes, depending upon whether the desired result is replication of the vector or expression of part or all of the vector-encoded nucleic acid sequences. Numerous cell lines and cultures are available for use as a host cell, as would be known to one of ordinary skill in the art, such as those, for example, that can be obtained through the American Type Culture Collection (ATCC), which is an organization that serves as an archive for living cultures and genetic materials (~~www.atcc.org~~). An appropriate host can be determined by one of skill in the art based on the vector backbone and the desired result.--

APPENDIX B: CLAIMS MARKED FOR AMENDMENT.

1. (Amended) A method for creating a nucleic acid comprising the steps of:
 - (a) annealing ~~at least one~~ a defined primer nucleic acid to at least one first single stranded template nucleic acid,
 - (b) performing a first extension by extending the primer nucleic acid employing the first template nucleic acid to form an extended nucleic acid,
 - (c) denaturing the extended nucleic acid from the first template nucleic acid,
 - (d) annealing the extended nucleic acid to at least a second single stranded template nucleic acid whose sequence is not identical to the first template nucleic acid,
 - (e) performing a second extension by extending the extended nucleic acid employing the second template nucleic acid to form a twice extended nucleic acid,
 - (f) adding at least one chain-terminating agent comprising at least one dideoxynucleotide, a dideoxynucleotide analog or a dideoxynucleotide derivative before or during at least one of the first extension or the second extension, wherein said chain-terminating agent is incorporated into said extended nucleic acid, and
 - (g) modifying or removing the chain-terminating agent from the extended nucleic acid, if a further extension is to be performed.
9. (Amended) A method for creating a nucleic acid comprising the steps of:
 - (a) annealing ~~at least one~~ a defined first primer nucleic acid to at least one first single stranded template nucleic acid,

- (b) performing a first extension by extending the first primer nucleic acid employing the first template nucleic acid to form a first extended nucleic acid
 - (c) denaturing the first extended nucleic acid from the first template nucleic acid,
 - (d) annealing the first extended nucleic acid to at least a second single stranded template nucleic acid whose sequence is not identical to the first template nucleic acid, and
 - (e) performing a second extension by extending the extended nucleic acid employing the second template nucleic acid to form a twice extended nucleic acid,
 - (f) adding at least one chain-terminating agent before or during at least one of the first extension or the second extension, and
 - (g) modifying or removing the chain-terminating agent from the extended nucleic acid, if a further extension is to be performed.
11. (Amended) The method of claim 9, wherein said chain-terminating agent is incorporated into said first or second extended nucleic acid.
16. (Amended) The method of claim 12, further comprising ~~having~~ adding at least one chain-terminating agent present before or during each extension.
19. (Amended) The method of claim 9, wherein said ~~at least one first~~ single stranded template nucleic acid or said ~~at least one second~~ single stranded template nucleic acid vary in size, sequence, resistance to cleavage or resistance to exonuclease degradation.
30. (Amended) The method of claim 9, wherein said ~~at least one defined~~ first primer nucleic acid comprises a sequence designed to anneal to a specific sequence comprising said first or second template nucleic acid.

31. (Amended) The method of claim 9, wherein said ~~at least one~~ defined first primer nucleic acid is resistant to cleavage or exonuclease digestion.
32. (Amended) The method of claim 9, wherein said ~~at least one~~ defined first primer nucleic acid is a plurality of primers.
34. (Amended) The method of claim 9, wherein the first extended nucleic acid comprises the primer nucleic acid.
35. (Amended) The method of claim 9, wherein said first or second extended nucleic acid is a recombinant, mutagenized or chimeric nucleic acid.
36. (Amended) The method of claim 9, wherein said at least one first single stranded template nucleic acid or said at least one second single stranded template nucleic acid is a plurality of template nucleic acids.
39. (Amended) The method of claim 38, wherein said length-altering agent comprises a nucleotide incorporated into said first or second extended nucleic acid.
53. (Amended) A method for creating a nucleic acid comprising the steps of:
- (a) annealing ~~at least one~~ a defined primer nucleic acid to at least one first single stranded template nucleic acid,

- (b) performing a first extension by extending the primer nucleic acid employing the first template nucleic acid to form an extended nucleic acid,
- (c) denaturing the extended nucleic acid from the first template nucleic acid,
- (d) annealing the extended nucleic acid to at least a second single stranded template nucleic acid whose sequence is not identical to the first template nucleic acid,
- (e) performing a second extension by extending the extended nucleic acid employing the second template nucleic acid to form a twice extended nucleic acid,
- (f) adding at least one length-altering agent before or during at least one of the first extension or the second extension, and
- (g) modifying or removing the length-altering agent from the extended nucleic acid, if a further extension is to be performed.

54. (Amended) The method of claim 53, wherein said length-altering agent comprises at least one ribonucleotide incorporated into said first or second extended nucleic acid.

55. (Amended) The method of claim 53, wherein said length-altering agent comprises at least one nucleotide analog incorporated into said first or second extended nucleic acid followed by alkylation of said extended nucleic acid.